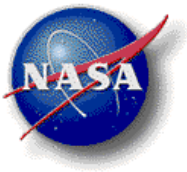


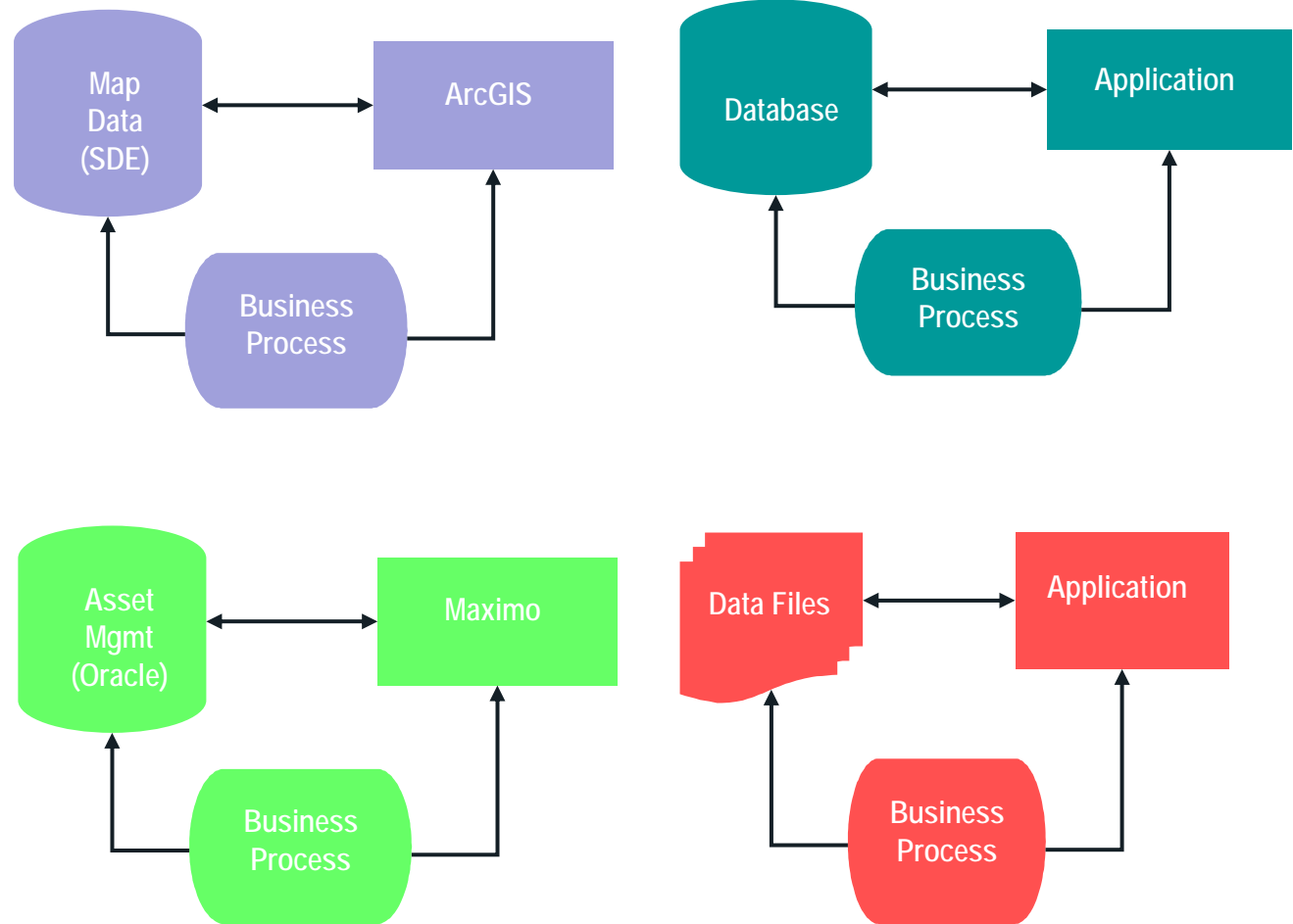
NASA Marshall Space Flight Center

Enterprise Databases and Geospatial Integration

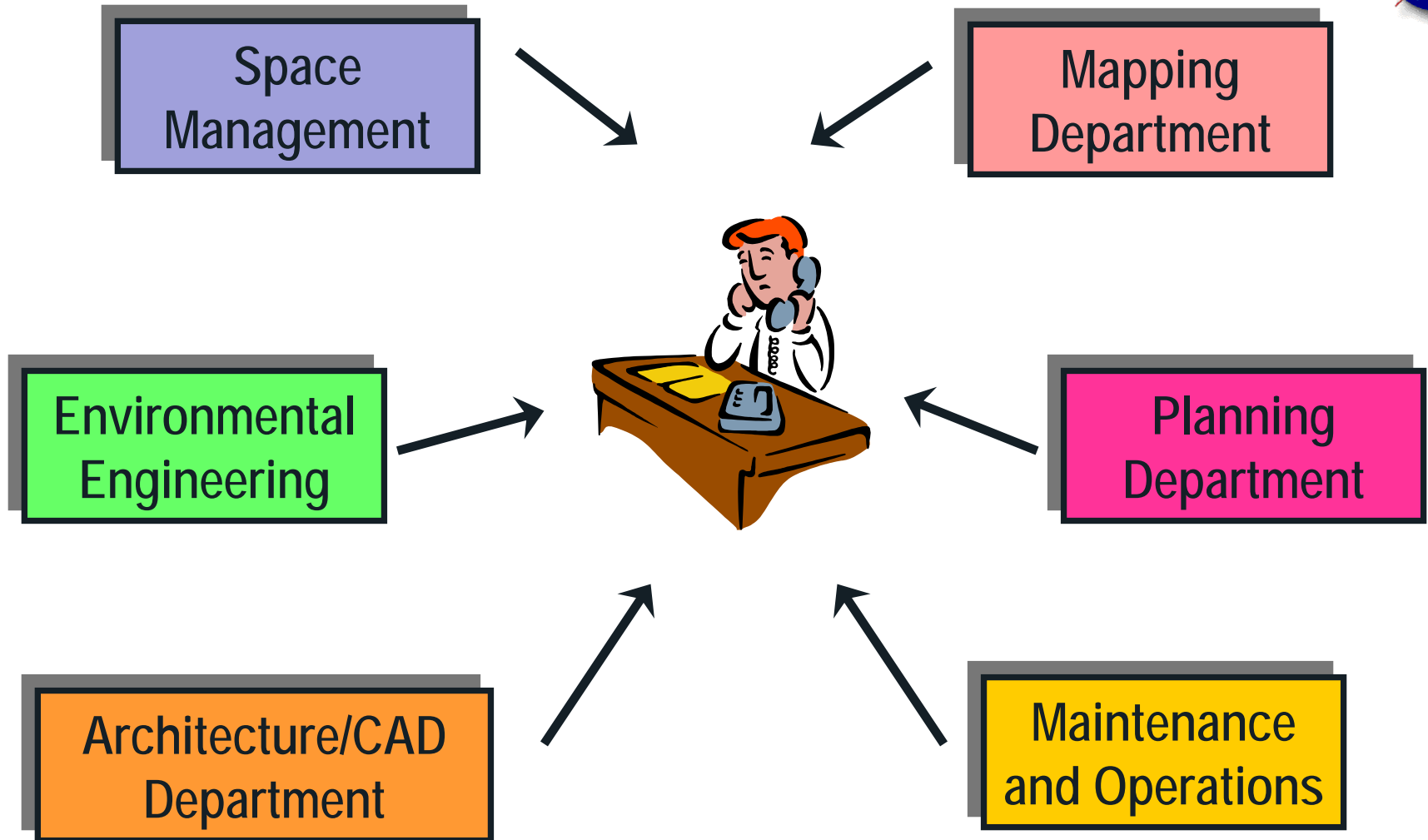


Independent Data Sets

- ◆ No Data Linkages
- ◆ Specially trained users.
- ◆ Complex Software
- ◆ Stove Pipe Solutions



Before – Collection of Information



Application Objectives

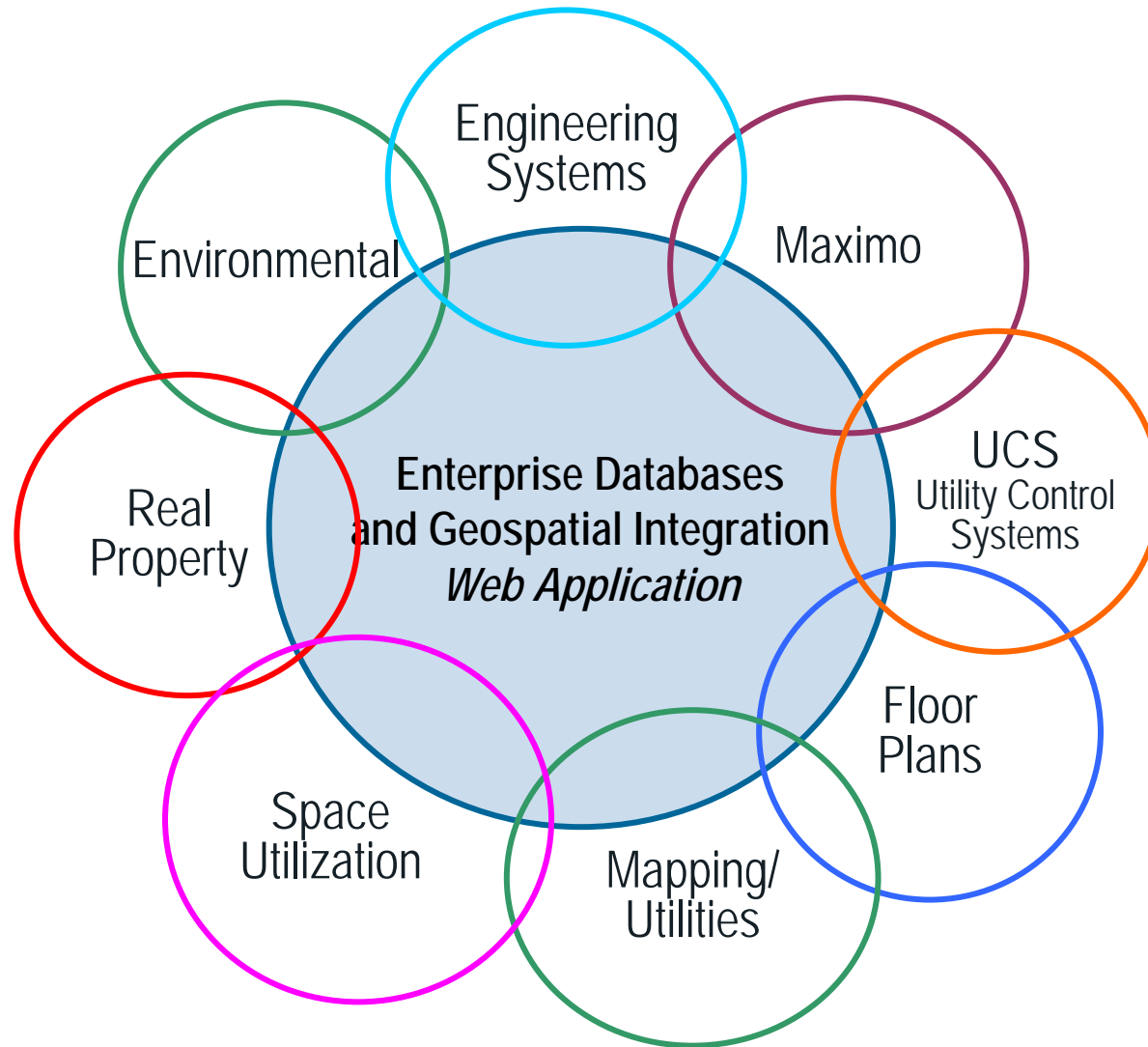
- ◆ Rapid Information Gathering
- ◆ Visual Information Portal
- ◆ Access all Pertinent Data Sets
- ◆ Integrate for Improved Information Gathering
- ◆ Must make business sense
- ◆ Improve Efficiencies
- ◆ Enhance Decision Making Capabilities

Application Objectives (cont'd)

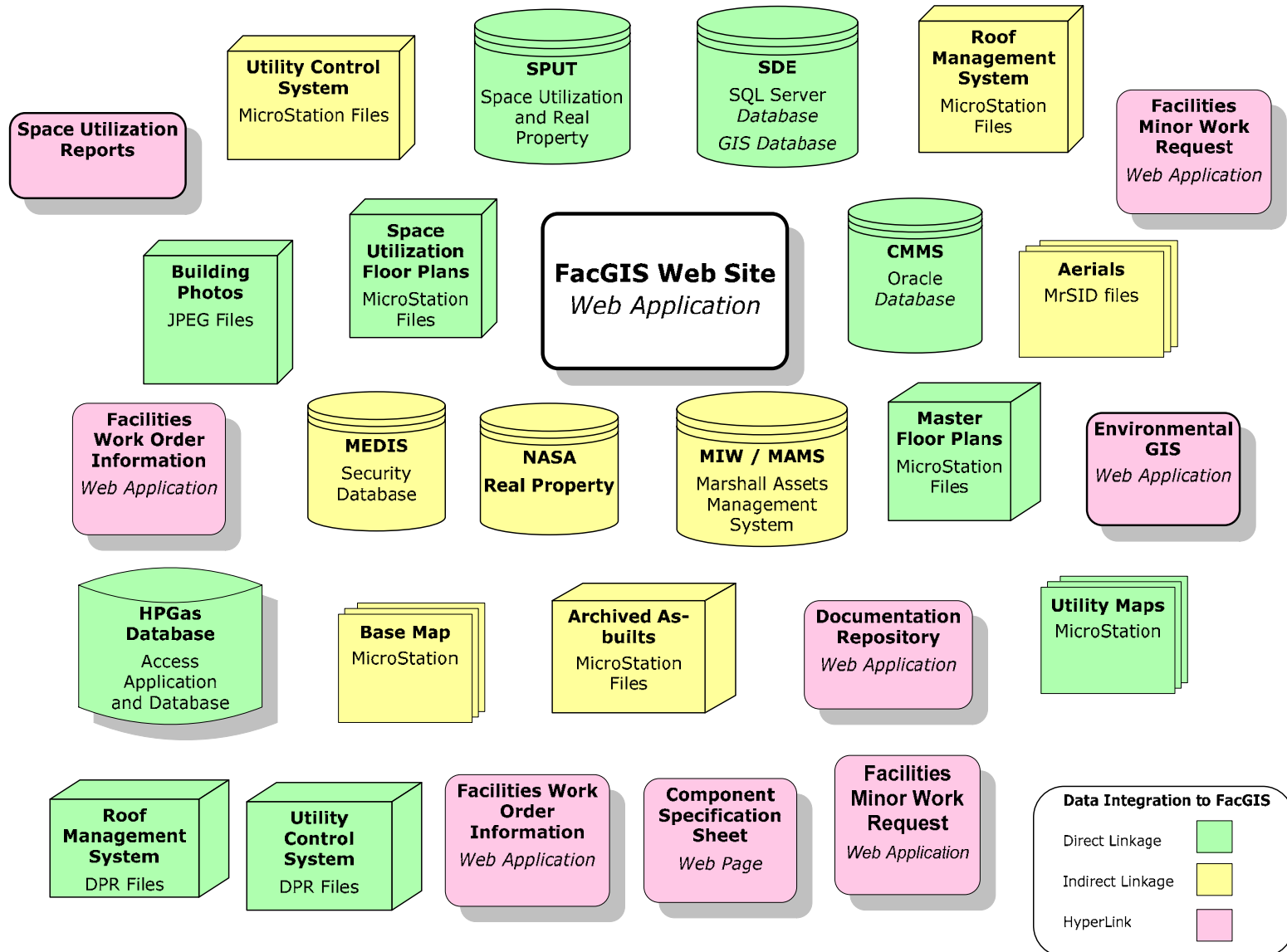


- ◆ Use Existing Databases
- ◆ Use Existing Business Processes
- ◆ Utilize Existing Software Products
- ◆ Leverage off of Existing Systems Investments
- ◆ Migrate existing databases only if feasible
- ◆ Users to Access Approximately 80% of Common Reports

Data Integration Objective



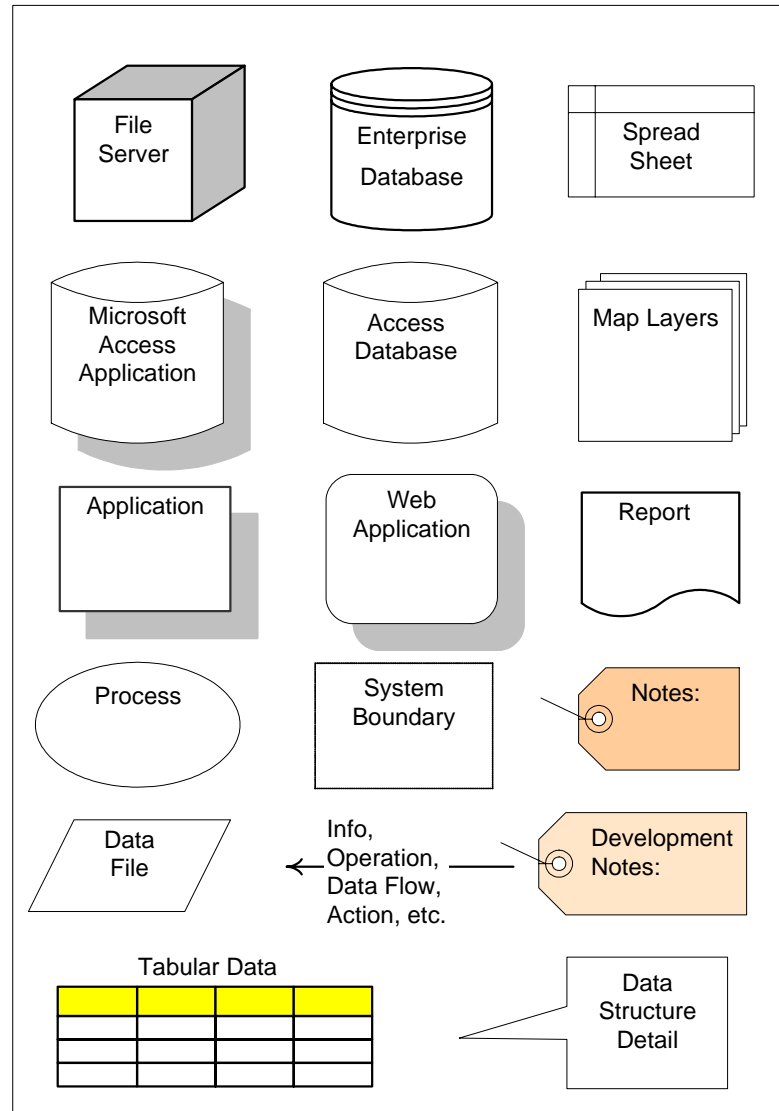
Integrated Enterprise Databases



Development Approach

- ◆ Data Modeling
- ◆ Data Flow Diagrams
- ◆ Data and Systems Inventory
- ◆ Interview Data Managers
- ◆ Interview Data Users
- ◆ Organize Systems into Components
- ◆ Use UML Concepts
- ◆ Map Data Flows throughout System
- ◆ Observe Data Patterns
- ◆ Detail All Systems

Diagram Legend





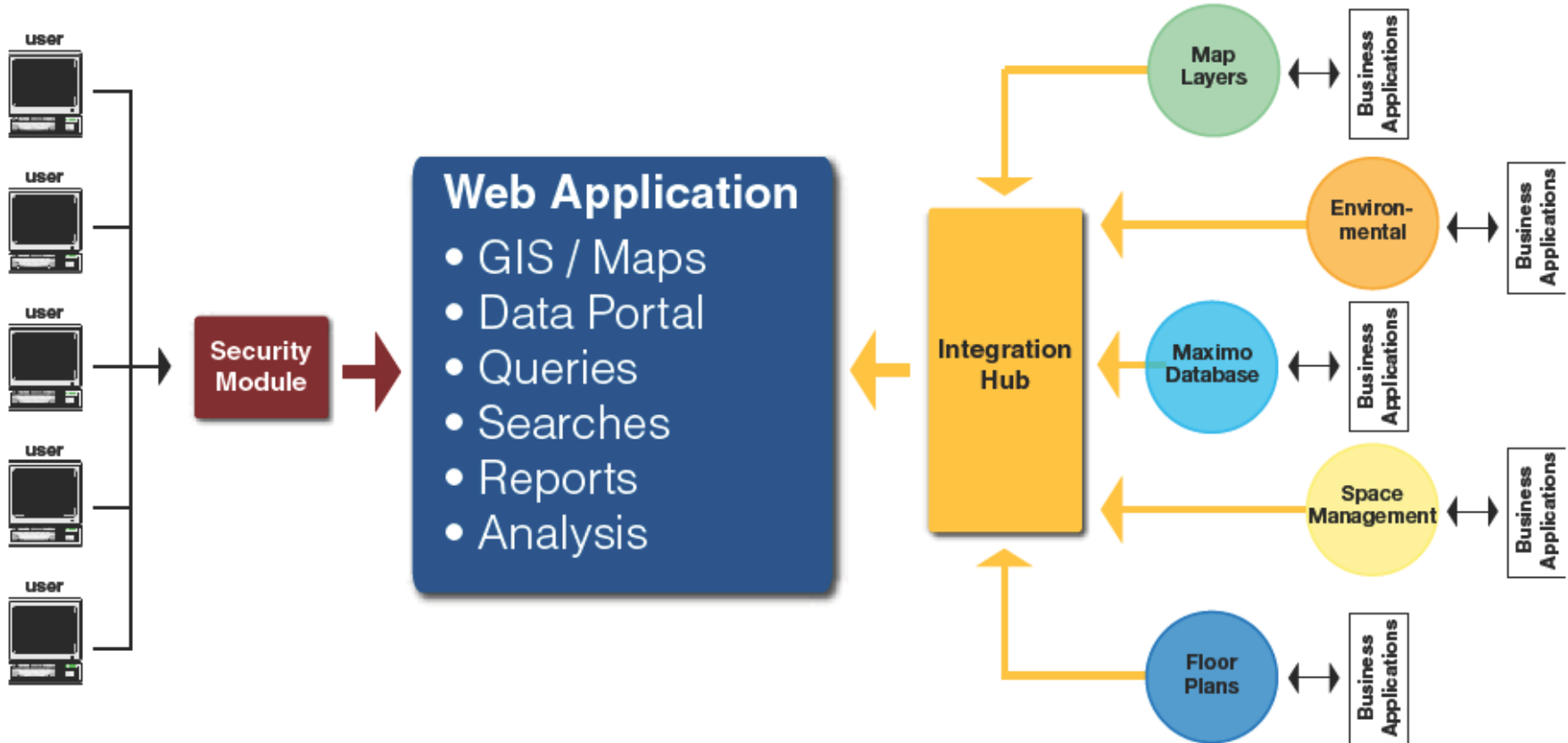
◆ Integration Hub

- Built into code
- Correlate Non-Homogeneous Databases
- Re-group numerous data sets into useable reports

◆ Access Control Module (Security)

- Allow Restricted Data to Specific Users.
- All Objects (reports, map layers, tools, etc.) in Application can be Controlled.

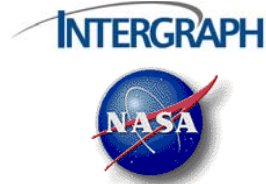
Data Integration Model



Modular Design

- ◆ Scalable
- ◆ Map Navigation Tools
- ◆ Web Menu Controls
- ◆ Layer Controls
- ◆ Search Tools
- ◆ Database Reports
- ◆ Data Copy and Paste Tools
- ◆ Printing Tools

Story Board Web Pages



◆ Customer Driven Design Requirements

Interactive Floor Plan Viewer - Bldg: *BldgNumber* Floor: *FloorNumber*

Floor & Layer Control

Select Building Name

Key-in Building No.

Select Floor

First Floor
Second Floor
Third Floor
Roof Plan

Layers

☒ Architectural Details ☒ Drawing Text On

☒ UCS

☒ Emergency Evacuation Plans

☒ Configuration Control (Future)

Searches

☒ By Floor ☐ By Building

Person Search: ☒ MSFC

Name List

Enter Last Name

Room Search:

Room List

Enter Room Number

Work Order Search:

Work Order List

Enter Work Order Number

Equipment Search:

Equipment List

Enter Equipment Number

Color Coding

Color By

Organization
Directorate
Vacant Space

Legend

Clear Color

Color Palate

Manual Color Fill

Drawing Control Frame

Zoom In Zoom Out Pan Fit Fence Rotate Redline Circle Polygon Cloud Text Delete Redline Copy Redline Move Redline Redline Color Line Size Text Size Print Measure Length Units ft-in dec-ft meters Measure Area Units ft² m² Identify

Floor Frame

Floor Plan - SVG File - Adobe SVG Viewer

Room Name

Sq Ft Type

centroid

Bldg: *BldgNumber* Floor: *FloorNumber* Room: *RoomNumber*

Occupants

Name 1
Phone 1
Org 1
Email1

Name2
Phone 2
Org 2
Email 2

Room Info

Sq Footage

Charge Back

Class

Type

Equipment Report

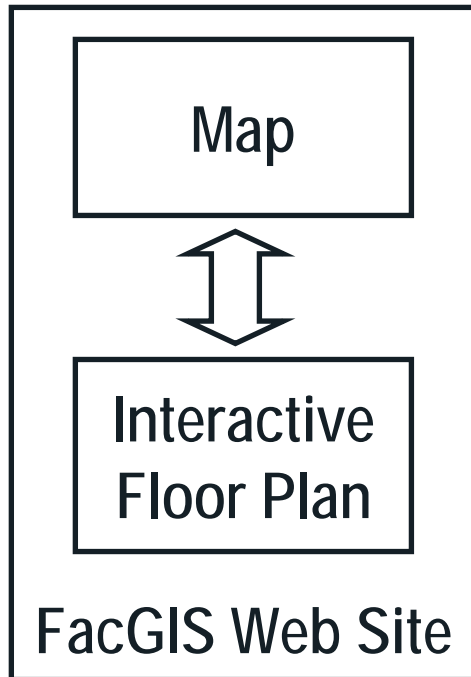
Work Order Report

Room Report

MAMS Report

• OnClick Email function.
Item #230 No. 49

The Application



Major Components

Map Component – Query and Report from Center Perspective

Interactive Floor Plan – Query and Report from Floor and Room Perspective

Application – Snap Shot

MSFC - Facilities Mapping Application

Building Search
People Search
Facility Information
CHMS Data
Map Layer Control

Excel Map

Utilities
Environmental
Monitoring Well Local
Floodplain
Wetlands
CERCLA Sites
Master Plan

Data Links

NASA Facilities GIS Portal
Marshall Space Flight Center

Office Building

Square Footage:
Current Replace Value:
Book Value:
Occupancy:

Building Drawings
Building Information
Interactive
Building Photos
Space Usage Report
High Pre

-- CHMS Facility Reports --

Interactive Floorplan Viewer - Bldg: Floor: 1

Floor Layer Control

Searches

By Floor By Building

Person Search All of MSFC
Name List
Last, First Go

Room Search
Room List
Room Number Go

Work Order Search
Work Order
#000125
#000143
#000149
#000154
#000155
#000159
#000160
#000160
#000160
#000160

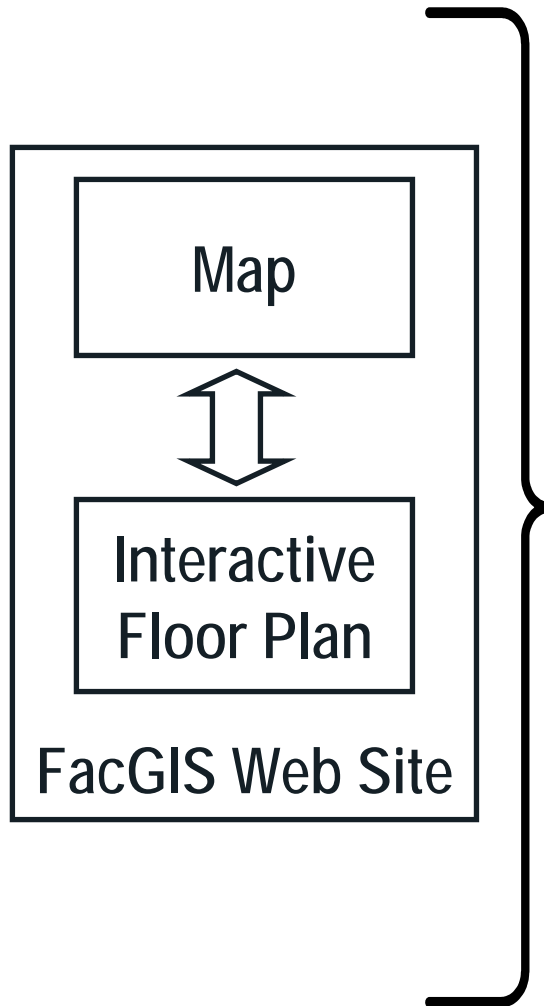
Building Reports

Line Size Text Size

Bldg: Floor: 1 Room: Last Archived: 03/23/2007 01:44:49 PM

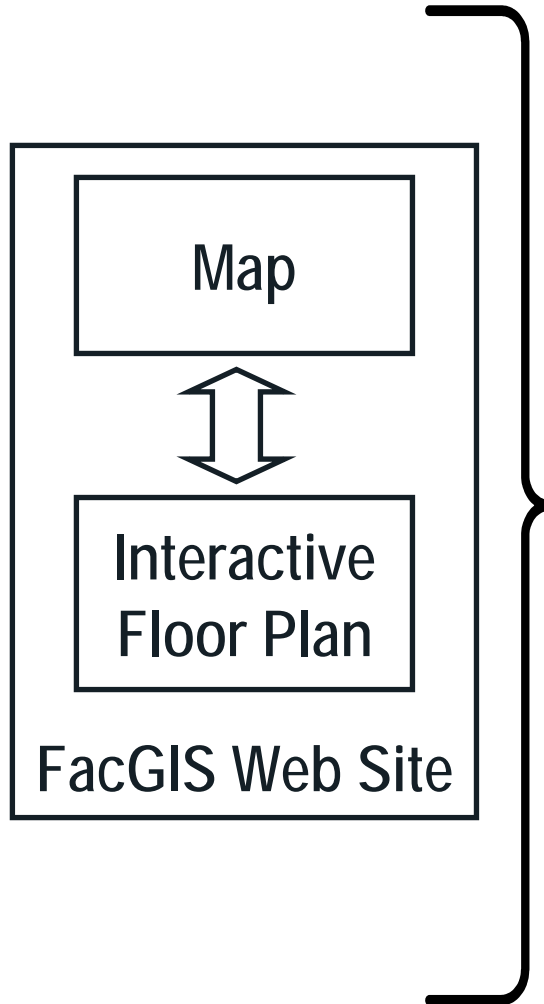
Occupants	Room Info
	Sq Ft:
	Chargeback:
	Class:
	Type:

Results – Access to Pertinent Information



- ◆ Environmental Maps
- ◆ Architecture Floor Plans
- ◆ Space Management
- ◆ Asset Reports
- ◆ Work Orders
- ◆ Room Data
- ◆ Utility Maps
- ◆ Master Planning Maps
- ◆ Support Maps

Results – Analyze Data



- ◆ Map Layers
- ◆ Thematic Maps
- ◆ Map Searches
- ◆ Person Searches
- ◆ Space Mgmt Reports
- ◆ Asset Mgmt Reports
- ◆ Color Code Rooms
- ◆ Measurement Tools
- ◆ Red Line Tools